Applying Shared Vision Planning to Identify a Conceptual Design of Water Demands

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Overview of Presentation

- Identified limitations in California Water Plan analysis
- How Shared Vision Planning can assist the Water Plan
- Linking Shared Vision Planning with a Statewide Water Analysis Network

Identified Limitations In California Water Plan Analysis

Identified Limitations

- No broad acceptance of prior analytical procedures
- Need detailed quantitative information about the costs, benefits, and broad social, environmental, and economic tradeoffs
- Data, analytical tool development, and data management have not kept pace
- Lack a consistent framework and standards for collecting, managing, and accessing data

Four Perspectives on Water Demands and the California Water Plan

One Urban Perspective

"One of the Advisory Committee recommendations for the next Water Plan is that DWR develop the portfolio models based on ... the 2005 Urban Water Management Plans. Another Recommendation is that DWR no longer use 'Applied' or 'Net' analysis..."

One Agricultural Perspective

"The Plan estimates future water needs by the long term extrapolation of 'current trends' regardless of the plausibility of the extrapolation."

One Environmental Perspective

- "The three scenarios developed by DWR do not sufficiently reflect a diverse range of plausible water futures..."
- "The 'Current Trends' scenario does not adequately address actual current trends in water prices, crop shifts, or adoption of efficiency technologies..."
- "The historical trend of water prices suggests that the price projections used in the Water Plan are too low..."

One Academic Perspective

"Prior Water Plan quantitative analysis, since 1983, has been unsuitably crude. Problems with subtracting a crude estimate of supply quantity from a crude estimate of water demand quantity to determine a "need" for additional supply are well discussed elsewhere ... "

How Shared Vision Planning Can Assist the California Water Plan

How Shared Vision Planning Can Help

- Can be applied to any water resource problem where stakeholders are willing to come to the table
- Allows stakeholders to identify what can be done and what ought to be done
- Focuses on facts and data relationships first, then values and tradeoffs
- Provides a method to structure and facilitate the debate
- Integrates policy, collaboration, and technical analysis

Linking Shared Vision Planning with a Statewide Water Analysis Network

Statewide Water Analysis Network

Why a Network?

- Problems identified for Water Plan are not unique
- Solution requires better integration and consistency at federal, state, regional, and local scales
- Difficult to reach consensus on specifics
- Expertise and funding are diffuse

3 Proposed objectives for SWAN

- Conduct pilot project to integrate UWMPs with Water Plan
- Develop common physical schematic of California's water management system
- Develop conceptual description of water demands

Proposed SWAN Pilot Project

Develop a conceptual design for the description of significant factors related to determining water demands in California that will aid water planning processes throughout California

Scope of Conceptual Design Pilot Project

- Oversight by an ad hoc work group
- DWR will develop an initial conceptual design based on its existing analytical methods
- Initial design to serve as the starting point for ideal representation of water demands
- Ideal representation will focus on the best technical representation

Approaches to Documenting Conceptual Design

- Unified Modeling Language
  - DWR currently evaluating potential of UML
  - Goal to present a working example using water demands by summer
- EXTEND object oriented modeling
  - Staff have been testing application for over a year on water balances
  - DEMO of one possible representation of conceptual design

Documenting the Conceptual Design of Water Demands Using EXTEND software

Summary
Shared Vision Planning

- Can assist the CWP with improving analysis and achieving better consensus
- Goal is to link with Statewide Water Analysis Network
- Initially, use to develop conceptual design of water demands

Reference Information

- http://www.waterplan.water.ca.gov/cwpu2005/index.cfm
  - Chapter 4, Volume 1, Update 2005
- http://www.waterplan.water.ca.gov/tools
- http://www.imaginethatinc.com
  - EXTEND software